

Amendments to the Claims

1-27. (Cancelled)

28. (Currently amended) An electric heater assembly comprised of:

(a) a metal tubular-shaped container having an inside surface and having a layer of electrically insulating material on said inside surface layer, said layer having a thickness in the range of 10 to 500 mils, said tubular container having an upper portion and a lower portion;

(b) a compacted powdered heating media having a controlled electrical resistivity contained in said container extending between said upper portion and lower portion;

(c) a first electrical current conduction means contacting said upper portion of powdered media; and

(d) an electric current feed conductor extending through said powdered media to a second electric current conduction means contacting said lower portion of said powdered media to permit electric current to flow from said first means through said powdered media to said second means, the electric current feed conductor having a layer of electrically insulating material on the surface thereof to prevent electrical short circuiting, the electrical resistivity of said media generating heat upon flow of said electric current.

29. (Original) The electric heater assembly in accordance with claim 28 wherein the resistivity of said powdered media ranges from 5 to 75 Ω -mm.

30. (Original) The electric heater assembly in accordance with claim 28 wherein the resistivity of said powdered media ranges from 10 to 55 Ω -mm.

31. (Original) The electric heater assembly in accordance with claim 28 wherein said powdered media comprises a powder selected from the group consisting of SiC, C, Mo, W, TiO₂, Si₃N₄, SiO₂ and BN.

32. (Original) The electric heater assembly in accordance with claim 28 wherein said powdered media comprises a mixture of an electrical conductive powder and an electrical non-conductive powder.

33. (Original) The electric heater assembly in accordance with claim 28 wherein said powdered media comprises a mixture of carbon powder and a powder selected from the group consisting of SiC, TiO₂, Si₃N₄, SiO₂ and BN.

34. (Original) The electric heater assembly in accordance with claim 28 wherein said powdered media comprises a mixture of carbon and SiC powder.

35. (Original) The electrical heater in accordance with claim 28 wherein said powdered media has a melting point in the range of 800° to 4000°C.

36. (Original) The electrical heater in accordance with claim 1 wherein said powdered media has an average particle size in the range of 5 to 3000 microns.

37. (Original) The electric heater assembly in accordance with claim 28 wherein said electrically insulating inside surface layer is comprised of alumina, magnesia, mullite, silicon carbide, silicon nitride or SiAlON.